

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
27 February 2003 (27.02.2003)

PCT

(10) International Publication Number
WO 03/015868 A1

(51) International Patent Classification⁷: **A61N 5/00**

(21) International Application Number: PCT/RO01/00015

(22) International Filing Date: 15 August 2001 (15.08.2001)

(25) Filing Language: English

(26) Publication Language: English

(71) Applicants and

(72) Inventors: **DEGERATU, D. Ion** [RO/RO]; Str. Vlad Tepes nr.80, com. Chiajna, judet Ilfov (RO). **CONSTANTINESCU, Vladimir** [RO/RO]; Str. Dristorului nr.3, bl. B7, ap. 19, Sector 3, R-Bucuresti (RO).

KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

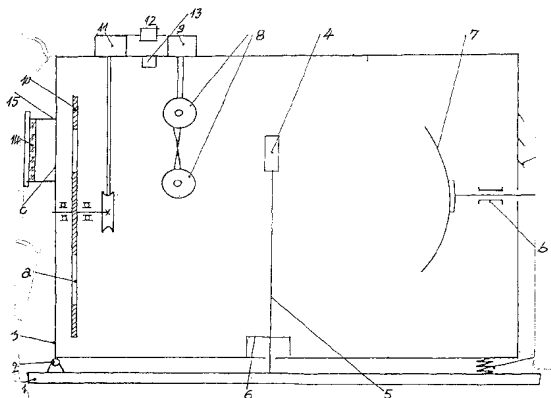
Published:

— with international search report

(81) Designated States (*national*): AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, JP, KE,

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: MEDICAL APPARATUS FOR LIGHT THERAPY



(57) **Abstract:** The invention is about a medical apparatus that uses the effects of an electromagnetic radiation pencil of light rays for obtaining energetic modifications at atomic level in the cell's biochemistry on the sick organs and organisms. The apparatus can be used for improving and even for curing some diseases thoughts as being incurable nowadays. The apparatus is destined for the degenerative energetic-diseases specific for our way of life in the nowadays society; vices, stress, feeding, sedentary way of life. The electromagnetic radiation pencil of light rays is obtained from a bulb with incandescence put in the focus of a parabolic mirror. The pencil of light rays is taken over by two reflecting cylinders operated by an engine into a variable movement in opposite directions, and transmitted than to a shutter disc that has two elliptical orifices and an engine that operates it. A voltage divisor operates both the shutter disc and the reflecting cylinders. The light pencil is focused in a lens that has an optic filter. It has to be modulated at a lower frequencies then the used radiation (longer wave lengths) for obtaining a long distance in penetrating the tissue. The medical apparatus doesn't use electromagnetic fields injurious to health, it permits the sure obtaining of the necessary frequencies needed in treating some diseases and it's easy to use.



WO 03/015868 A1

MEDICAL APPARATUS FOR LIGHT THERAPY

The invention refers to a medical apparatus that uses the effects of the electromagnetic field on living organisms, using a bright determined color artificial flux that can be used to improve or to cure some diseases thought as being incurable nowadays.

A great number of apparatus are known as being used for curing through irradiation on the living tissue.

So, in patent France no. 2277599 it is presented an apparatus made of a source of mono-chromatic intense light, whose pencil of light rays is focused by a spot and deviated by an ensemble of permanent magnets put in a wreath around it.

Better known is the patent of France no. 2639934 in which it is described an apparatus – a light generator in visible and infrared spectrum with induced electric and magnetic effects.

The apparatus has a source of light, a spot, and an anti-caloric filter for ultraviolet rays and for waves with wave's length shorter than 500 nm., too.

The pencil of light is modulated by an induced alternative magnetic field and by an induced alternative electric field, orthogonal on the magnetic one. It can be mentioned the patent of France no. 2668068 in which it is described a method of exhibition of a living body to mono-chromatic bright rays.

The exhibition takes place in a certain time given by a programmer and at different colors depending on the organism's disease.

The procession is in fact an application of the chromic-therapy for improving some diseases or for relaxing the organisms but it has the disadvantage of not curing.

These apparatus have as disadvantage the interaction of the electric or magnetic field with metallic elements, which has as consequence the medical contraindication for pace-marker bearers, osteo-synthesis items or other metallic prosthesis.

Another medical apparatus has been patented in Romania, Patent no. 112248 having the title "Medical Apparatus for Light Treatments". This apparatus removes the disadvantages of the above mentioned apparatuses, because of the polarized applied light that could lead to making better or even to curing some diseases, obtaining better results in comparison with those mentioned above.

The technical problem solved by this invention is to avoid the use of electric and magnetic fields in the light pencil's processing

The medical apparatus for biological treatments removes the above mentioned disadvantages because it uses electromagnetic radiation for modulating, separating, focusing and filtering of a pencil. A bulb with incandescence emits the pencil of light rays, for obtaining energetic modifications at the atomic level, in cellular biochemistry.

The medical apparatus resolves the problem of treating the non-congenital diseases with the aid of some bright radiation.

The medical apparatus, according to the invention, resolves the above problem because the electromagnetic field applied to a sick person it is obtained from a source of light put in the focus of a parabolic mirror.

The light ray is taken over by two reflecting cylinders symmetrically set in front of the light source and the optical filter. They are involved by an engine in a variable turning round movement in opposite directions.

In the light pencil's way, processed as we mentioned above, a rotating shutter is to be assembled on one of the case's inner side where is the optic filter, too.

An engine operated by a voltage divisor as reflecting cylinders too operates the shutter disc.

The shutter disc has two elliptical orifices that are coaxial on the optic filter's axis.

The bright flux obtained in this way is composed of direct rays from the light source and rays reflected from the parabolic mirror. The rays are processed by two reflecting cylinders and by the shutter disc and then are focused through a lens

The final pencil of rays obtained in this way, after following through this optic labyrinth, has to be modulated at lower frequencies to the radiation that was used (higher wave lengths) for obtaining a long distance in penetrating the tissue.

The medical apparatus, according to the invention, has the following advantages:

- a sure obtaining of the necessary frequencies needed in treating some diseases
- it doesn't use electromagnetic fields injurious to health
- it is possible to use the treatment for sick people bearing a pace
- marker
- the elimination of the medical treatments
- the co-ordination, depending on the case, of the naturist methods based on disintoxication of the organism and on the introduction in the diet of the vitamins in accordance with the disease
- easy to use.

Another example for processing the invention is given further, being connected to picture no.1, that represents the principle scheme of the apparatus

The medical apparatus for treatment, corresponding to the invention, is the artificial light source and optic filter type. It is characterized as being built of: a **case 3**, assembled with some **joints 2**, and a spring on a **basic plate 1**, on which it is fixed a **support 5**, of the light ray with incandescence having the power of 600-1200w.

For ensuring a uniformity of ventilation for the bright item, the **fan 6** will be set in front of an orifice of the basic plate.

Through one bulb operation it is obtained the interference between the incidental ray and the reflected ray in coherent conditions (the same frequency).

The type of the bulb 4, used with incandescence, has to be a pencil of light rays focused as much as possible on one point.

The pencil of light rays' power is given by the capacity of transmitting to distance, the intensity of the ray and the possibility of mechanic modulation, for avoiding the overheating effect on skin.

The source of light is set in the focus of a **parabolic mirror 7** made of a material with a high absorption coefficient of infrared radiation.

The positioning of the mirror has to carry out the parallelism condition between the incidental ray and the reflected ray, having the possibility of displacing through the **handle bar b**.

The positioning of the bulb to the reflecting item has to carry out the conditions of obtaining the parallel pencils of light.

For protecting the bulb, regarding the efficiency of the apparatus' operation, it is recommended to use a system of gradually lightning and extinction.

The light ray reflected by the parabolic mirror it is taken over by two **reflecting cylinders 8** covered with mirror fragments smaller than 15 cm^2

The reflecting cylinders are set symmetrically to the source and the **optic filter 14** and an **engine 9** involves them in a variable turning round movement in opposite directions.

The rotating cylinders create the beating phenomenon (the amplification) of the electromagnetic radiation of the source.

In the light pencil's way, processed as we mentioned above, a **rotating shutter 10** is to be assembled on one of the case's inner side where is the optic filter, too.

An **engine 11** operated by a voltage divisor operates the shutter disc. for obtaining the modulation frequencies.

Both the engine of the shutter disc and the engine of the reflecting cylinders are ventilated by a fan 13, for having a good operation.

The voltage divisor 12 (the time relay) coordinates both the varieties of the rotating frequency of the shutter disc and that of the rotating cylinders, for obtaining the emergent modular ray.

The principle scheme of the voltage divisor is a trinistor equivalent made of transistors in the threshold unit, as we can see in the figure on the page (fig. 2).

The divisor has two sub-scales of timing values: 1-60sec. and 1-60min.

The signal's error of timing for the room temperature is of maximum 5% in the established value.

Timing circuit is made up of the condenser C3 (or C4) and the variable resistor R9.

At the input of the threshold unit it is the transistor with a field effect and the Zener diode connected at its gate circuit.

At the output of the unit is the obstructive trinistor equivalent (that becomes struck when the current flows the control electrode) made of VT3 and VT4 transistors. The regulating unit of the current in the charge, through the variation of phase's impulses, operates with a dinistor equivalent (a trinistor diode made of VT1 and VT2 transistors), a C2 condenser and a variable resistor R4.

In the executive unit is the VS1 trinistor connected on the bridge's cross over with the VD1-VD2 diodes, through the circuit made of the HL1 incandescence lamp and the R1 resistor and a 0 resistance. The bridge is connected at the network through the L1C1 non-disturbance filter.

In the initial state, if the charge is connected at X1 and X2 jacks, the network voltage rectified by the diodes bridge is applied to the VD5, VD6, R6 voltage parameter stabilizer

The voltage on the VD5, VD6 Zener diode it is applied through the R4 resistor, the C2 condenser and the R5 R3 divisor that determine the unblocking voltage of the dinistor equivalent made of VT1 VT2 transistors.

The trinistor's equivalent (with the VT3, VT4 transistors) is flowing. That's why the C2 condenser is discharged and on the dinistor's equivalent it isn't applied any voltage – it is blocked.

The current impulses are missing on the control electrode of the trinistor and the trinistor is blocked, too. Through the charge it isn't flowing any current.

The time divisor (the relay) is charged through pressing the SB1 button. In that moment, the rectified network voltage charges the timing

condenser till the stabilizing voltage of the VD8 Zener diode. This is operated through the R8 resistor, through closed contacts of the button and the VT3, VT4 transistor equivalent that is flowing. So, the timing condenser is charged at the stabilizing voltage of the VD8 Zener diode. When the button is again in his initial state, the timing condenser starts the discharge through the R9 resistor.

Because the stabilizing voltage of the VD7 Zener diode is lower than that of the timing condenser, the diode is pierced and through the VT5 transistor's gate it appears a positive voltage to its source. The VT5 transistor and the other transistors that form the VT3 and VT4 transistor equivalent stop flowing.

In these conditions, when the next alternance of the network's voltage starts, starts the charging of the C2 condenser through the R4 variable resistor, too. Depending on the position of its slider, the condenser is charging till the unblocking voltage of the VT1, VT2 transistor's analogue with a high or a low speed. When the voltage of the transistor's analogue reaches its unblocking level, it starts flowing through it the current of the VS1 transistor's control electron. The transistor is unblocked and it connects the charge. After the transistor's analogue is unblocked, the C2 condenser discharges through it and R2 resistance. When the network's voltage flows to 0, the VS1 transistor and the transistor's analogue stop charging. During the next alternance the processes repeat. If the position of the R4 variable resistor's slider is in the right side (see the figure), the voltage of the C2 condenser reaches faster the unblocking threshold of the transistor's analogue. The VS1 transistor is unblocked and lets to flow in the charge a longer sequence of the network's voltage alternance.

So, the medium current in the charge is higher.

If we put the slider of the R4 variable resistor in the left side (see the figure), the C2 condenser's voltage reaches later the unblocking voltage of the transistor's analogue.

That means that the medium current of the charge will be lower, too. As we can see, with the R4 variable resistor's aid it is operated the slow regulation of the current in the charge. When the timing condenser's voltage decreases under the maintaining level of the VD7 Zener diode's piercing, the VD5 transistor opens and the circuit comes back to the initial state.

Then the light goes through a shutter disc that has two elliptical orifices that are coaxial on the optic filter's axis.

The shutter disc positions the elliptical orifices exactly contrary to the long axis tangent to a circle with the circumference on the 14 optic filter's axis.

The axis' ratio of the ellipses of the orifices is: 0.66-0.95

The rotating speeds of the moving items are equal to each other and they are between 400 and 1.5 Hz. The ray processed by the shutter disc goes through an orifice made on the inner side of the casing c and it is then directed through a lens 15 on which it is fixed the optical filter 14.

The filter is an optical type filter that limits the visible spectrum till about 400nm. wave lengths

The final pencil of light rays resulted after the following of this optical labyrinth has to be a minimum of intensity, to be mechanic modulated by lower frequencies than the used radiation (longer wave lengths) for obtaining a long distance in penetrating the tissue.

The apparatus is destined for the degenerative energetic-diseases specific for the human beings way of life in our society: vices, stress and feeding, sedentary way of life.

For animals the consistence of the treatment is ensured with a high efficiency, for the diseases of the same type, for pets integrated in the same parameters of life as the man's parameters.

The treatment hasn't a sufficient effect only on the affected tissue.

The energetic modifications at a microscopic level are made in the energetic centers - the organism's conductors.

The lens of the apparatus is to be applied on the patient' skin, the pencil of light rays being perpendicular on the skin.

The time of the expose is proportional with the zones of application on the human body and with the frequencies used for different tissues.

It is known that among the four interactions existing in the nature, only the unionized electromagnetic one has the power conditions and the action ray needed to govern and influence the biologic processes of the living world. The ionized electromagnetic radiation (including the ultraviolet one) has destructive effects on the biologic world, reducing every experience to violent un-controlling mutations. It's about the energies' domain of the electromagnetic field, having an essential role in reactions that involves the recognition of the complementary structures, as for example: the retort, the transcription and the repair of DNA and the translation of the genetic message in the protein's biosynthesis.

It can be theoretically and experimental demonstrated that strict physical laws, through the electromagnetic field's energy lead all mechanisms that stock and operate with biologic information. The purpose is - knowing that any affection represents a genetic deficiency at a certain level of the organism - to cure. The basic cause, it is the introducing and fixing at informational level, through un-corresponding feeding in the most cases, of

the un-corresponding atoms from the energetic point of view. At the DNA's level, the apparition of these atoms for a long time period destabilizes the weaker chemical links, but links that are directly responsible for maintaining the genetic information. Specially, it is about the inter-chaining links among the four nucleotide, that at the chemical level represents the hydrogen bridge. These links' disconnection for too long time periods, on certain sequences of the DNA's molecule, except for the natural mitosis or meiosis phenomenon that is controlled by the oxygen, lead to informational modifications at the level of some genes, to the synthesis of some unspecific amino-acids, respectively proteins. So, all these lead to the affect of the cellular metabolism. This fact leads further to the non-integration of these new-formed cells in the metabolic interrelations of the entire biologic complex, so, to the disease's appearance.

The curing attempts at chemical level through medicines have mostly only the role of correcting the causes' effects of the disease's appearance, the genetic information modification. That's why, principally, these treatments can lead most of times to an improvement, a delay of the disease appearance. More than that, through the obtaining processes, synthesis medicines introduce in organism chemical substances, that used for a long period of time, lead to fixing in organism atoms with non-corresponding superior energies.

If we try, and this is possible only at physical level, through energetically modifications on the atomic levels of the DNA molecule, we can directly cancel the cause of the disease's appearance, so the rectification of the genetic information. This is possible at the level of quantum physics.

Theoretically we found out that the energies corresponding to the hydrogen's links flowing are energetically compatible with atomic transitions corresponding to a limited number of wave length in the electromagnetic spectrum. The transitions resulted as an interaction result are subjected through the respective values, to the uncertainty principles Heisenberg (the equation between time and energy), that's why experimental measurements are impossible. Theoretically we can find the field of values with the aid of some wave functions corresponding in Schrodinger's equation.

Through bombing with photons of above-mentioned energies, it appears in case of the existing split levels, at the level of the quantum number m_1 , which corresponds, to the necessary energies for recovering the nucleotide's sequences corresponding to the genetic informational local standard of the specie. Only the magnetic component of the electromagnetic

field is responsible for these liked changes, the electric one having an insignificant effect at thermal-dynamic level.

One of the positive immediate aspects but not a basic one is the change of the magnetic properties. So it is to be underlined the paramagnetic susceptibility through eliminating diamagnetic substances with an energetic destabilizing role. Among these, important roles have the water and the free hydrogen, considered chemical elements with strong pathological effect when they accumulate in the cell, knowing that nitrate basis are strong hydrophobic.

The bio-stimulating effects are developed at the cell's level, especially at the level of the cell's membrane. Under the action of the polarized light increases the energetically activity of the cell's membrane. The bio-energetically potential of the cell increases. The DNA and the RNA, the protein system and the bio-synthetically processes are activated leading to the increase of the oxygen in blood.

Through stimulation we can understand the process of activating the physiological and reconditioning-physiological functions. The electromagnetic field has a direct influence on the nervous-endings and on the nervous system. So, the bio-stimulation activates at different levels.

At sub-cellular level, the stereo-chemical changes of the cells accelerate the collagen and albumin synthesis, the oxygen change and the process of coming out of the oxidio-reductional products (anti-toxic action). At the cell's level, the potential of the cell's electric field increases, the potential of the cell's membrane changes, the proliferation increases a. s. o.

At the organism's level: cell's reorganizing, organism's function normalizing, accelerating and maintaining the health condition.

CLAIM

The medical apparatus for biologic treatments is the artificial light source and optic filter type. It is characterized as being built of: a case 3 assembled with a joint 2 and a spring on a basic plate 1, on which it is fixed a support 5, of the incandescence light source in the focus of a parabolic mirror 7, operated through a handle bar b.

The light ray emitted by a bulb with incandescence 4, ventilated by a fan 6, it is processed by a parabolic mirror and transmitted to two reflecting cylinders 8 that are involved in a variable movement in opposite directions. The ray is processed by a shutter disc 10 that has two elliptical orifices and than it goes through an orifice c. The resulted ray is directed to an optic filter 14 placed into a lens 15.

The 9 and 11 engines that are operated by the voltage divisor 12 and ventilated by a fan 13 operates both the shutter disc and the reflecting cylinders

The resulted light ray it is a biotic one.

INTERNATIONAL SEARCH REPORT

International Application No
PCT/RO 01/00015

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A61N5/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A61N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 92 13597 A (PRZYBILLA CAROL) 20 August 1992 (1992-08-20) the whole document -----	1

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

° Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- * & * document member of the same patent family

Date of the actual completion of the international search

17 April 2002

Date of mailing of the international search report

25/04/2002

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Petter, E

INTERNATIONAL SEARCH REPORT

Information on patent family members

In International Application No

PCT/RO 01/00015

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 9213597	A	20-08-1992	RO 104844 B1	20-06-1992
			EP 0525151 A1	03-02-1993
			WO 9213597 A1	20-08-1992
<hr/>				